

## CLAIMS

1. Culture medium conditioned by cytokines and soluble factors released by immortalized untransformed hepatocytes that are differentiated, polarized epithelial cells; said medium being characterized in that it is free from conditioning cells when used for maintenance, proliferation and differentiation of mammalian cells, including human cells.
2. Culture medium according to claim 1 wherein said hepatocytes are murine MMH cells.
3. Culture medium according to claims 1-2 wherein said MMH cells are genetically modified.
4. Culture medium according to claims 1-3 wherein said the cultured mammalian cells are embryonic or adult cells.
5. Culture medium according to claims 1-3 wherein said the cultured mammalian cells are cord-blood stem cells.
- 15 6. Culture medium according to claims 1-3 wherein said the cultured mammalian cells are non human embryonic stem cells or adult stem cells including human.
7. Culture medium according to claims 1-3 wherein said mammalian cells are endodermal, ectodermal and mesodermal cells or their progenitor.
- 20 8. Culture medium according to claims 1-3 wherein said mammalian cells are endodermal, ectodermal and mesodermal and adult stem cells.
9. Culture medium according to claims 1-8 characterized for further comprising at least one biological molecule selected from the group consisting of proteins, glycoproteins, lipoproteins, carbohydrates, lipids, glycolipids, peptides, antibodies, cytokines, hormones and enzymes.
- 25 10. Culture medium according to claims 1-8 further characterized for being depleted for at least one biological molecule selected from the group consisting of: proteins, glycoproteins, lipoproteins, carbohydrates, lipids, glycolipids, peptides, antibodies, cytokines, hormones and enzymes.
- 30 11. Culture medium according to claims 1-8 wherein said untransformed hepatocytes are genetically modified in order to express at least one specific biological factor selected from the group of: proteins, glycoproteins, lipoproteins,

carbohydrates, lipids, glycolipids, peptide, antibodies, cytokines, hormones and enzymes.

12. Culture medium according to claims 1-11 in form of a solid, a lyophilized, a powder, a gel, a film, or a freeze-dried compound.

5 13. Culture medium according to claims 7-9 wherein the maintenance, the proliferation and the differentiation of mammalian cells is performed in order to further condition the MMH-conditioned medium.

14. Process for production a culture medium according to claims 1-13 comprising the steps of incubating the hepatocytes in a culture medium for at least

10 2 hours and separating said hepatocytes before the use for culturing mammalian cells.

15. Process according to claim 14 wherein the separation step is performed by filtration or by centrifugation.

16. Process according to claims 14-15 herein said culture medium is RPMI,

15 Ham's F12, Dulbecco's Modified Eagle's Medium (DMEM), RPMI 1640, Iscove's, McCoy's.

17. Mammalian cells treated with the conditioned medium according to claims 1-13 to be used in the medical field.

18. Mammalian cells according to claims 1-13 to be used for cellular

20 transplantation protocols.

19. Mammalian cells according to claims 1-18 to be genetically engineered.

20. Mammalian cells according to claims 1-19 to be used for the production of biological molecules.

21. Pharmaceutical composition comprising the mammalian cells according to

25 claims 17-18 to be used in the medical field.

22. Pharmaceutical composition comprising the mammalian cells according to claims 17-18 to be used in cellular therapy protocols

23. Use of the conditioned medium according to claims 1-13 for the preparation of a culture medium for growing, expand, maintain and /or differentiate isolated

30 cells *in vitro*.

24. Use according to claim 23 wherein said isolated cells are cord-blood stem cells.

25. Use according to claim 23 wherein said isolated cells are non human embrional stem cells or adult stem cells.
26. Use according to claim 23 wherein said cells are endodermal, ectodermal and mesodermal cells or their progenitor.
- 5 27. Use according to claim 23 wherein said cells are NK cells.
28. Use according to claim 23 wherein said cells are dendritic cells.
29. Use according to claim 23 wherein said cells are endothelial cells.

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